



Size: 2.91in x 2.13in x 0.77in (74mm x 54mm x 19.5mm)

FEATURES

- Universal 85-264VAC Input Voltage Range
- Fully Encapsulated Plastic Case for PCB, Chassis, and DIN-Rail Versions
- I/O Isolation 4000VAC with Reinforced Insulation
- Over Load, Over Voltage, and Short Circuit Protection
- Protection Class II per IEC/EN 60536
- RoHS & REACH Compliant
- Medical and Industrial Safety Approvals

DESCRIPTION

The PSAJM24 Series of AC/DC medical and industrial power modules offers up to 24 watts of output power in a PCB, Chassis or DIN Rail fully encapsulated plastic case. This series consists of single and dual output models with a universal input range of 85-264VAC and I/O isolation 4000VAC with reinforced insulation. Each model in this series has over load, over voltage, and short circuit protection, is RoHS & REACH compliant, and has both medical and industrial safety approvals. Please call factory for order details.

MODEL SELECTION TABLE

Single Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency	Output Power
				115VAC, 60Hz	@230VAC, 50Hz			
PSAJM-24S05	85~264VAC (120-370VDC)	5VDC	3000mA	282mA	169mA	2200µF	77%	24 Watts
PSAJM-24S09		9VDC	2666mA	424mA	255mA	1000µF	82%	
PSAJM-24S12		12VDC	2000mA	419mA	252mA	1000µF	83%	
PSAJM-24S15		15VDC	1600mA	424mA	255mA	680µF	82%	
PSAJM-24S24		24VDC	1000mA	409mA	246mA	470µF	85%	

MODEL SELECTION TABLE

Dual Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current	Input Current		Maximum Capacitive Load ⁽²⁾	Efficiency	Output Power
				115VAC, 60Hz	@230VAC, 50Hz			
PSAJM-24D12	85~264VAC (120-370VDC)	±12VDC	±1000mA	414mA	249mA	470#µF	84%	24 Watts
PSAJM-24D15		±15VDC	±800mA	414mA	249mA	330#µF	84%	

SPECIFICATIONS

All specifications are based on 25°C, Resistive Load, 115VAC, 60Hz Input Voltage, After Warm-Up, and Rated Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
AC Input Voltage Range		85		264	VAC
DC Input Voltage Range		120		370	VDC
Input Frequency		47		440	Hz
Inrush Current	@115VAC, Cold Start at 25°C			20	A
	@230VAC, Cold Start at 25°C			40	
No Load Power Consumption				0.3	W
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy			±2.0		%
Line Regulation	Vin=Min. to Max. @Full Load		±0.5		%
Load Regulation	Io=0% to 100%	Single Output Models	±0.5		%
		Dual Output Models	±2.5		
Overshoot				5	%
Output Power		See Table			
Output Current		See Table			
Minimum Load		No Minimum Load Requirement			
Maximum Capacitive Load		See Table			
Ripple & Noise (20MHz bandwidth)	5V Output Models		1.5	1.8	%Vp-p of Vo
	Other Output Models		1.0	1.3	
Temperature Coefficient			±0.02		%/°C
Hold-Up Time	@115VAC, 60Hz				
	@230VAC, 50Hz				
PROTECTION					
Short Circuit Protection	Hiccup Mode		Automatic Recovery		
Over Load Protection ⁽³⁾	85VAC, Hiccup Mode, Automatic Recovery	105			%Inom.
Over Voltage Protection	Zener Diode Clamp		120		% of Vo
ENVIRONMENTAL SPECIFICATIONS					
Operating Ambient Temperature	Natural Convection	-40		+80	°C
Storage Temperature		-40		+95	°C
Humidity	Non-Condensing			95	%RH
Power Derating	Above +65°C	5V Output Models		0.75	W/°C
		Other Models		1.2	
Lead Temperature	1.5mm from case for 10Sec.			260	°C
Thermal Shutdown	Shutdown, Internal iC Junction Temperature		142		°C
	Automatic Recovery, Internal IC Junction Temperature		67		
Cooling ⁽⁴⁾		Natural Convection			
MTBF	Calculated per MIL-HDBK-217F @25°C, Ground Benign		400,000		Hours
GENERAL SPECIFICATIONS					
Typical Efficiency	@Max Load, 115VAC	See Table			
Switching Frequency			132		kHz
Isolation Voltage	Reinforced Insulation, Rated for 60 Seconds	4000			VACrms
Isolation Resistance	500VDC	1000			MΩ
Leakage Current			80		μA
PHYSICAL SPECIFICATIONS					
Weight	PCB Mount	4.83oz (137g)			
	Chassis Mount	5.19oz (147g)			
	DIN Rail Mount	7.09oz (201g)			
Dimensions (L x W x H)	PCB Mount	2.91in x 2.13in x 0.77in (74mm x 54mm x 19.5mm)			
	Chassis Mount	3.78in x 2.13in x 0.92in (96mm x 54mm x 23.3mm)			
	DIN Rail Mount	3.78in x 2.13in x 1.35in (96mm x 54mm x 34.3mm)			
Case Material		Plastic Resin (Flammability to UL 94V-0 rated)			
Pin Material	PCB Mount	Copper Alloy with Gold Plate over Nickel Subplate			

SPECIFICATIONS

All specifications are based on 25°C, Resistive Load, 115VAC, 60Hz Input Voltage, After Warm-Up, and Rated Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
SAFETY CHARACTERISTICS						
Safety Standards	UL/cUL 60950-1 ⁽⁶⁾ , CSA C22.2 No 60950-1 ANSI/AAMI ES60601-2, CAN/CSA-C22.2 No. 60601-1 IEC/EN 60950-1, IEC/EN 60601-1 3 rd Edition 2xMOPP					
Safety Approvals ⁽⁵⁾	UL/cUL 60950-1 Recognition (UL Certificate) ⁽⁶⁾ ANSI/AAMI ES60601-1 2xMOPP recognition (UL certificate) IEC/EN 60601-1 3 rd Edition (CB Report)					
EMI	Conduction and Radiation	EN55011 EN55022 EN55032 EN61000-6-4 EN61000-6-3 FCC Part 15				Class B
EMS	EN60601-1-2 4 th , EN55024, EN61000-6-2, EN61000-6-1					A
	ESD	EN61000-4-2 Air ±15kV, Contact ±8kV				A
	Radiated Immunity	EN61000-4-3 10V/m				A
	Fast Transient	EN61000-4-4 ±2kV				A
	Surge	EN61000-4-5 ±1kV				A
	Conducted Immunity	EN61000-4-6 10Vrms				A
	PFMF	EN61000-4-8 30A/m				A
	Dips & Interruptions	EN61000-4-11	0% of 230VAC	0.5 Cycle		
0% of 230VAC			1 Cycle			A
70% of 230VAC			25/30 Cycle			A
0% of 230VAC			250/300 Cycle			B

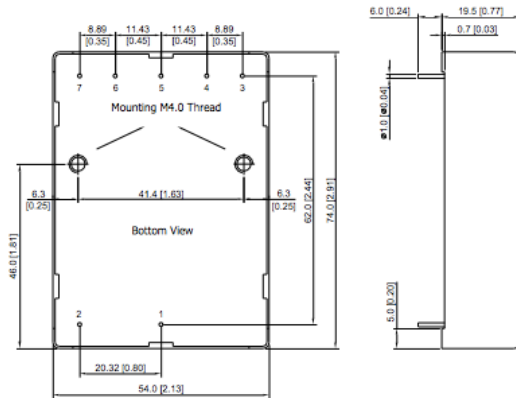
NOTES

- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet.
- # for each output.
- Long term overload conditions may cause damage.
- Natural convection is about 20LFM but is not equal to still air (0LFM).
- Safety approvals cover frequency 47-63Hz.
- Other input and output voltages may be available, please contact factory.
- It is recommended to protect the converter by a slow blow fuse in the input supply line.
- This product is Listed to applicable standards and requirements by UL.

**Due to advances in technology, specifications subject to change without notice.*

MECHANICAL DRAWINGS

PCB Mount

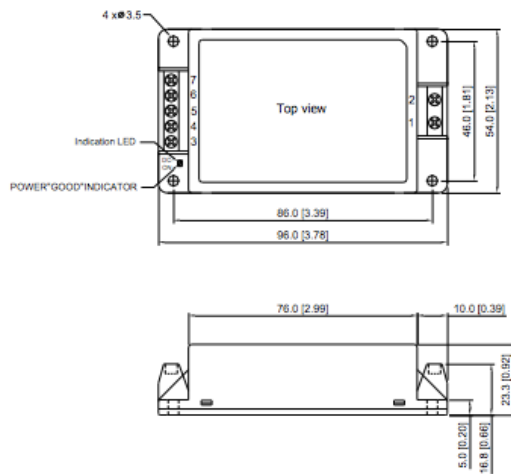


Pin Connections

Pin	Single Output	Dual Output
1	AC (N)	AC (N)
2	AC (L)	AC (L)
3	No Pin	No Pin
4	-Vout	-Vout
5	No Pin	Common
6	+Vout	+Vout
7	No Pin	No Pin

Notes:
 All dimensions in mm (inches)
 Tolerance: ± 0.5 (± 0.02)
 Pin Diameter $\varnothing 1.0 \pm 0.1$ (0.04 ± 0.004)

Chassis Mount (-C Suffix)



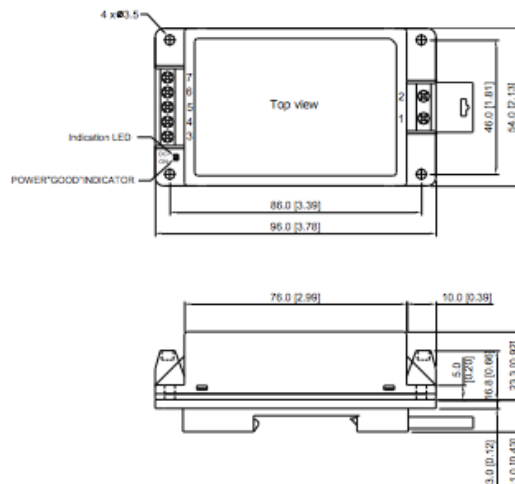
Pin Connections

Pin	Single Output	Dual Output
1	AC (N)	AC (N)
2	AC (L)	AC (L)
3	NC	NC
4	-Vout	-Vout
5	NC	Common
6	+Vout	+Vout
7	NC	NC

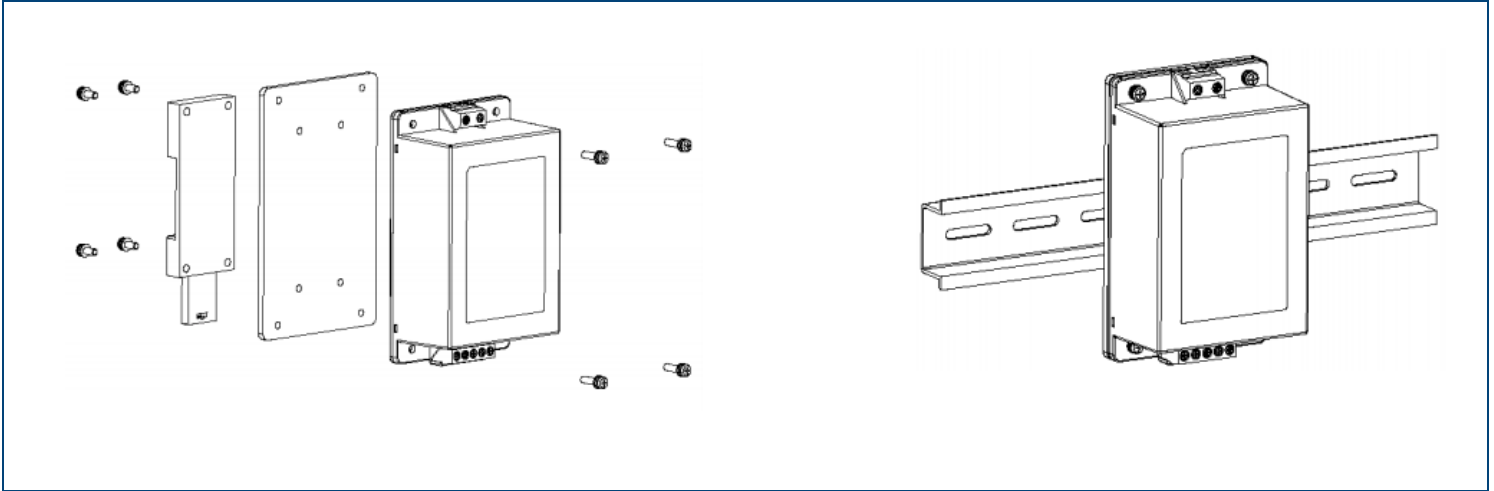
NC: No Connection

Notes:
 All dimensions in mm (inches)
 Tolerance: ± 0.5 (± 0.02)

DIN Rail Mount (-DN Suffix)



DIN-RAIL MOUNTING BRACKET



MODEL NUMBER SETUP

PSAJM	24	-	S	09	C	DN
Series Name	Output Power		Output Quantity	Output Voltage	Chassis Mount	DIN Rail Mount
			S: Single Output	05: 5VDC 09: 9VDC 12: 12VDC 15: 15VDC 24: 24VDC	C: Chassis Mount	DN: Din Rail
			D: Dual Output	12: ±12VDC 15: ±15VDC		

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

Phone: ☎ (603)778-2300
 Toll Free: ☎ (888)597-9255
 Fax: ☎ (603)778-9797
 E-mail: sales@wallindustries.com
 Web: www.wallindustries.com
 Address: 37 Industrial Drive
 Exeter, NH 03833

©2019 Wall Industries, Inc. Specifications subject to change without notice. Wall Industries is not responsible for typographical errors. The information contained herein is for informational purposes only. This information is provided by Wall Industries and we make no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information contained in this document for any purpose. All product and manufacturer names are trademarks or registered trademarks of their respective companies.